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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/574,987	05/12/2000	Carol A. Becker	82408	9258

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San Diego, CA 92152-5765

EXAMINER

TRAN, THAO T

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 12/05/2002

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/574,987

Applicant(s)

BECKER, CAROL A.

Examiner

Thao T. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-13, 27-35 and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-13, 27-35 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. This is in response to the Amendment received on September 24, 2002. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.
2. Claims 7-13, 27-35, and 37 are pending in this application. Claim ~~38~~³⁶ has been canceled.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 7-13, 27-35, and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7, 34, and 37 are indefinite due to the improper use of the word “disposed”. The word “disposed” is defined as “arranged in a particular order” (see American Heritage). There appears to be no order required by the specification.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claim 34 is rejected under 35 U.S.C. 102(b) as being anticipated by Amatore et al. (J. Electroanal. Chem. Interfacial Electrochem.) or Hoffmann (Nature).

Amatore teaches a solution containing protonated anthracene and a polyelectrolyte fiber (aromatic hydrocarbons) (see abstract).

Hoffmann teaches a solution containing protonated anthracene and a polyelectrolyte (see abstract).

7. Claims 34 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Hargreaves et al. (Macromolecules).

Hargreaves teaches a solution containing protonated anthracene and a polymer from acrylamide fluorescein isocyanate, vinylpyrrolidone copolymer (see abstract).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amatore, Hoffmann, or Hargreaves as applied to claim 34 above, and further in view of Zirino (US Pat. 5,334,629).

Amatore, Hoffmann, and Hargreaves are as set forth in claim 34 above and incorporated herein.

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None of the references of Amatore, Hoffmann, and Hargreaves teaches the polymer in the solution to be a polyacrylic acid-polyvinyl alcohol.

Zirino teaches a solution containing a polyelectrolyte fiber which is a polyacrylic acid-polyvinyl alcohol (see abstract; col. 1, ln. 35-42; col. 2, ln. 44-63).

Zirino^{further} teaches that polyacrylic acid-polyvinyl alcohol has good selective light actuation and powering, which in turn would respond better to pH changes by significantly changing its' volume (see col. 7, ln. 66 to col. 8, ln. 12).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have substituted the polyelectrolyte fiber, as taught by Zirino, for the polymer of Amatore, Hoffmann, and Hargreaves.

Allowable Subject Matter

10. Claim 7 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

11. Claims 8-13 and 27-33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter:

No prior art has been found to teach or suggest an apparatus, comprising a solution containing anthracene and a source of visible light, wherein the irradiation with light of a wavelength and of an intensity to establish a pH change in the solution and a polymer in the

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solution would undergo a change in volume upon irradiation and the light would cause anthracene to phosphoresce; in combination with all of the other limitations in claim 7.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 703-306-5698. The examiner can normally be reached on Monday-Friday, from 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 703-308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



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December 2, 2002


RABON SERGENT
PRIMARY EXAMINER